WE HAVE
THE KEY FOR IOT

Your IoT-Solution
fast and flexible
via drag & drop

t-matix

IoT at the next level

AFFORDABLE TOOLS
WITH MAXIMUM FLEXIBILITY

Ralf Parfuss
CEO, t-matix solutions gmbh

The Internet of Things has become part of our daily lives and provides us with exciting opportunities and possibilities. Even though organizations recognize the great potential, there is still a lack of flexible, affordable IoT tools to make ideas and applications quick and cost-effective to implement.

We have assisted many customers and distributors in recent years with the introduction of solutions that ensure IoT is sustainably implemented into their businesses. In doing so, we observed that each customer had different technology requirements and the solutions available on the market were limited with respect to fulfilling the customer's individual requirements.
This is where our solution comes in:
t-matix delivers a completely independent and flexible IoT-Platform, which enables customers to create applications in no time at all, on their own and without any special programming skills.

NO PROGRAMMING
The t-matix solution is comparable to the evolution of the internet. Earlier, a considerable effort was necessary for the programming of websites and further modifications and updates proved extremely costly and time consuming.

DRAG & DROP
Nowadays, we have flexible CMS systems that enable customers to create websites with very little effort, thus enabling them to easily maintain and modify their web pages by themselves. We offer an IoT-Platform comparable to the user-friendly CMS system, with multiple functionality which allows for individual and professional applications with no programming skills. The focus is on quality and user friendliness.

ALL-IN-ONE SOLUTION
With the t-matix building kit, comprising of the Portal Designer and a TCU (t-matix control unit), we offer an all-in-one solution for a simple and cost-effective gateway into the „Internet of Things".
Use this unique opportunity and realize your ideas and innovations.

This is „IoT at the next level".

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THE IOT BUILDING KIT FOR YOUR IOT PLATFORM

Build your own applications in a few easy steps and expand them whenever you want.

t-matix
Control Unit

t-matix
Portal Designer

t-matix
App Builder

TCUs transmit and receive data and commands. Choose a transmitting unit that matches your requirements from a variety of TCUs or alternatively, have t-matix develop a TCU exclusively for your application.

Benefit from a multitude of different functions. With the t-matix Portal Designer you can easily create individual portals on your own and assign them to specific user groups.

Create individual Apps for your users in a few easy steps, providing optimal support for processes while avoiding overloading the user. Nobody knows your environment better than you do.
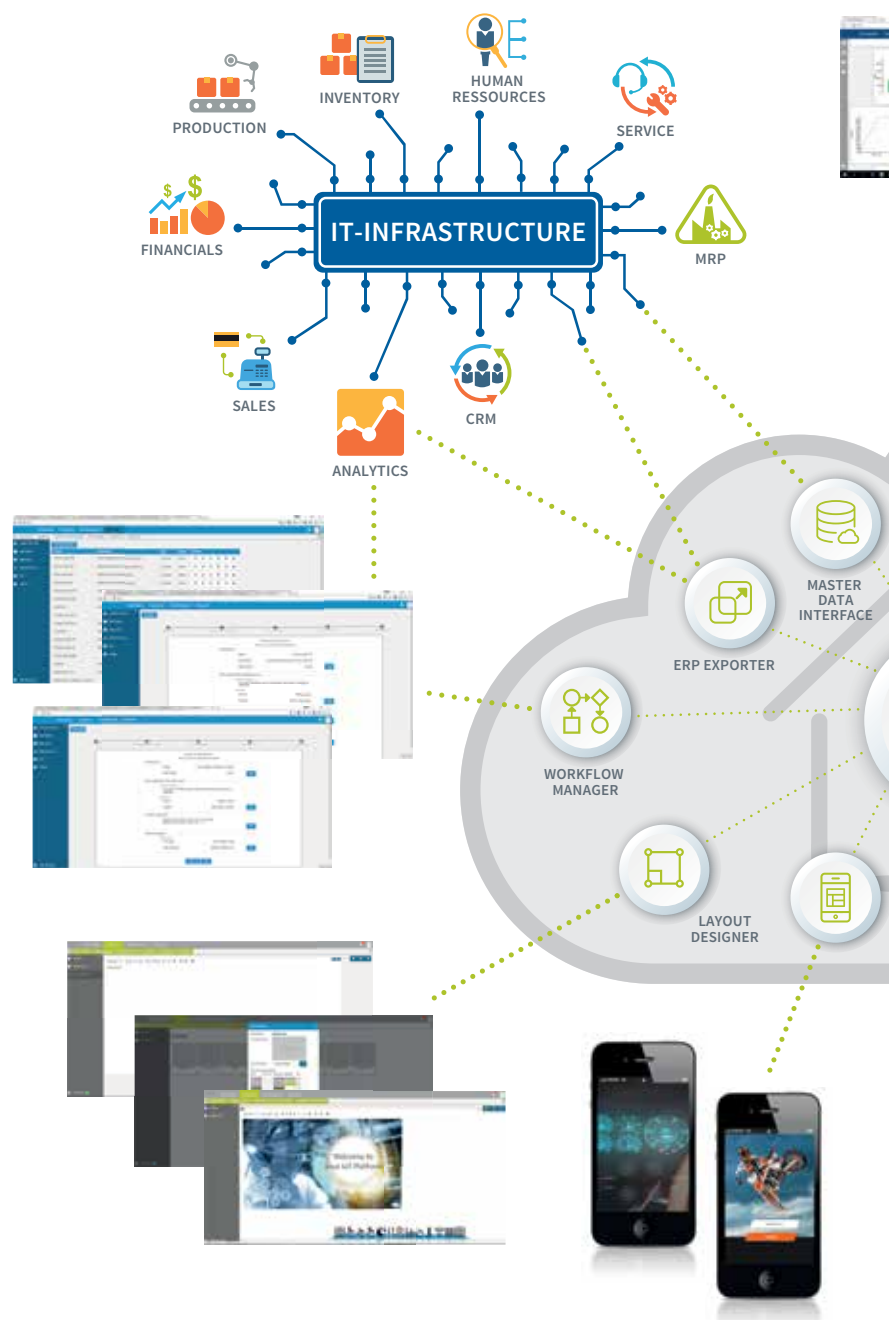
T-MATIX IOT-PLATFORM

The t-matix IoT-Platform comprises the t-matix Portal Designer, a flexible tool for the creation of IoT applications for your company and your product. With its many interface modules, it allows for quick and simple integrations, as well as adaptations to existing structures and systems.

The **Layout Designer** enables the IoT portal environment to be configured according to customer requirements, at the same time adopting corporate identity.

The **Data Qualifier** and **Data Validation** modules qualify the incoming sensor data and identify it thereby ensuring that the data entering the IoT-Platform is relevant. The system is extremely flexible as it allows the processing of any type of data source, as well as effectively capturing and processing the incoming data. Interface problems between hardware and software are a thing of the past. A unique feature are the many validation options that provide a reliable database for all future applications.

Devices and master data are handled in **Device Management**. This includes the assignment of privileges, the allocation of features to devices and the storage or sending of commands to specific devices. In addition, devices can be allocated to groups to enable smoother control of other parts of the IoT-Platform, e.g. an automated process for a device group can be set up in the Workflow module.

PRODUCTION

INVENTORY

HUMAN RESSOURCES

SERVICE

FINANCIALS

IT-INFRASTRUCTURE

MRP

SALES

ANALYTICS

CRM

MASTER DATA INTERFACE

ERP EXPORTER

WORKFLOW MANAGER

LAYOUT DESIGNER

Feature Management uses graphical tools to generate valuable information from device data. For example, GPS data provides information about travelled routes and mathematical functions calculate new KPIs from sensor data.

With **Data Management** and the **Data Aggregation** module, recorded data can already be pre-calculated at runtime. This functionality allows for unlimited scalability as well as high performance for all applications, even where enormous amounts of data are concerned.

The **ERP Exporter** transmits validated data to any third-party system. Tasks such as intervals, pre-aggregation, retry attempts and validity periods are configured for this purpose based on the requirements. At the same time, it is also determined in which format the data is to be transferred to the external system.
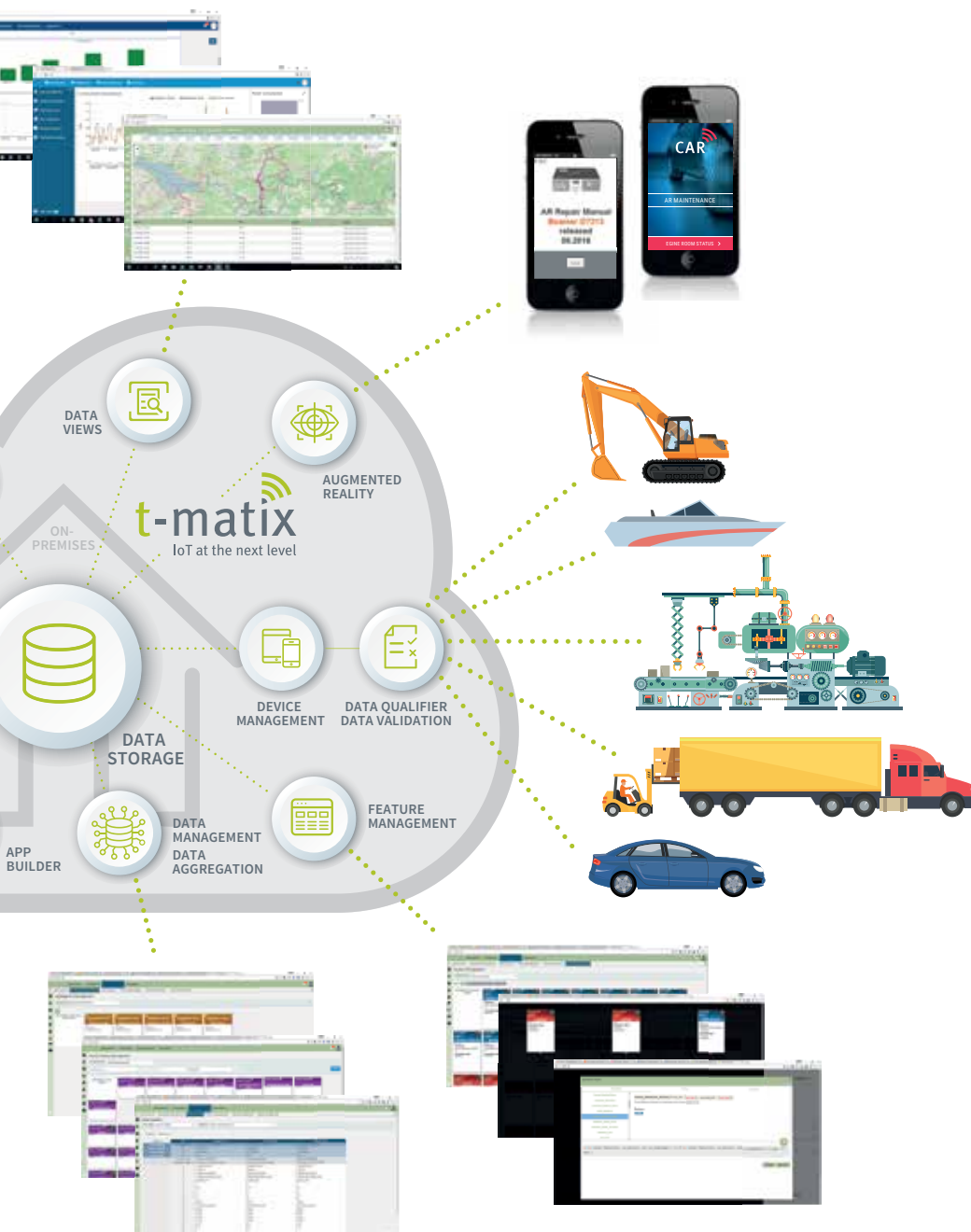
The **Workflow Manager** creates any number of events using IF-THEN decisions or complex workflow chains which trigger user notifications or send commands to machines, which in turn start new workflows.

With the **Master Data Interface**, external master data can be imported automatically or manually and machine data can be merged with the external master data. The Data Views module allows for the creation of individual web applications and the preparation of data using various graphical elements such as line charts, bar charts, KPI widgets, pivot tables, maps as well as the presentation of simple tables, etc.

With the native **App Builder**, users can use simple drag&drop to create individual Apps for Android and IOS which are available real-time on mobile devices. The different functional elements offer maximum flexibility in order to deliver even complex requirements with a professional „look & feel".

Complex Augmented Reality technologies can be developed without any programming in the App Builder using the integrated **AR Builder**. The AR applications are integrated into the IoT-Platform and enable the display of data as well as the recognition of objects. This allows complex sequences to be optically supported and monitored. In addition, quality verifications are created automatically.

DATA VIEWS

AUGMENTED REALITY

ON-PREMISES

t-matix
IoT at the next level

DEVICE MANAGEMENT

DATA QUALIFIER DATA VALIDATION

DATA STORAGE

APP BUILDER

DATA MANAGEMENT DATA AGGREGATION

FEATURE MANAGEMENT

CAR

AR MAINTENANCE

AR Repair Manual

T-MATIX CONTROL UNIT

For each individual application required we offer a suitable transmitting unit for mapping out processes.

Tracker

Monitor

Commander

Trackers are used for recording GPS positional information and can be handled individually via the t-matix Portal Designer. Trackers require no external power supply. They are suitable for backpacks, travel or school bags, pets, packages, valuables, bicycles, individuals and groups, containers, garbage cans and much more.

Depending on the TCU type, Monitors offer one or more sensors that can be readout (e.g. container door OPEN/CLOSED, movement detection, flooding detection) and are therefore extremely versatile. Suitable for most vehicles (CanBus), motorbikes, machines, equipment and much more.
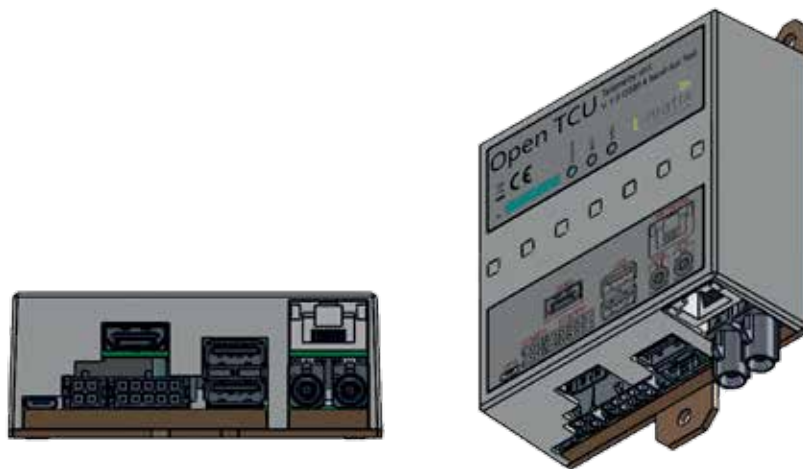
Commanders are TCUs which can record position information and data as well as receive commands and process data like the ON/OFF status of a machine and much more. Suitable for machines with several sensors, e.g. vending machines, diesel generators, boats, cars, trucks, machines or devices with CAN-Bus.

OPEN TCU

We offer individually configurable TCUs for special applications that cannot be handled using standard solutions.

Open TCU is an open platform for diverse applications. Based on Linux/Android, it allows for quick and individual creation of onboard applications for special implementations.

On the hardware side, there are two CPUs installed. One of them manages the entire hardware and energy requirements, while the other is responsible for controlling complex algorithms and all software communication.

The Open TCU has two USB-inputs for connecting USB-Sticks, Bluetooth modules, RFID/Barcode-Readers or even printers. Two CAN interfaces are also available for communication with other peripheral devices.

Extra analogue and digital inputs are available for additional sensors. GSM and GPS ports meet the FAKRA-Standard requirements thereby simplifying the selection of appropriate antennas.
The power supply is implemented externally and can even be replaced by a solar module. If necessary, a rechargeable Li-Ion battery will manage the entire power supply.

t-matix solutions gmbh

Head Office Graz
Hallerschloßstraße 3
8010 Graz

Projects & Products
Frauentalerstraße 100
8530 Deutschlandsberg

Software Development
T-Matix Solutions Podružnica
Radnička Cesta 47
10000 Zagreb

t +43 (0) 3462 347340
office@t-matix.com

www.t-matix.com

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